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Mental health needs assessment for children and adolescents in Montana

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Multi-Disciplinary Task Force
State of Montana

Mental Health Needs Assessment for Children and Adolescents in Montana

Final Report

February 1995

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February 1995

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SA0924

OFFICE OF THE GOVERNOR
STATE OF MONTANA

MARC RACICOT
GOVERNOR

STATE CAPITOL
HELENA, MONTANA 59620-0801

November 16, 1994

Jack P. Casey, Administrator
Shodair Hospital
P.O. Box 5539
Helena MT 59604

Dear Jack:

I have reviewed your letter concerning the creation of a steering committee to conduct an unbiased mental health needs assessment.

After speaking with Directors of the affected state agencies and recognizing the necessity for thoughtful and dispassionate inquiry, I have asked the Directors of participating state agencies to select an individual to represent the various perspectives important to the project.

Thank you for your assistance in this effort.

Sincerely,

Marc Racicot

MARC RACICOT
Governor

cc: Bob Robinson
Charles Aagenes
Hank Hudson
Peter Blouke
Rick Day

TELEPHONE: (406) 444-3111 FAX: (406) 444-5529

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Introduction

Chi Systems, Inc. was engaged in October of 1994, by inpatient providers of child and adolescent mental health services in collaboration with the Montana Board of Health, to conduct a mental health needs assessment for the publicly sponsored youth of Montana. A particular focus of the needs assessment was to evaluate the higher cost components of the continuum (i.e., acute inpatient and residential beds). The objectives of the engagement were to formulate recommendations regarding the:

- Development of the continuum of care for mental health services to meet the needs of the child and adolescent population of Montana.
- Direction of public policy as it relates to provision of mental health services to publicly sponsored youth.

The figures on pages iii and iv illustrate the planning process for this engagement. The planning process included:

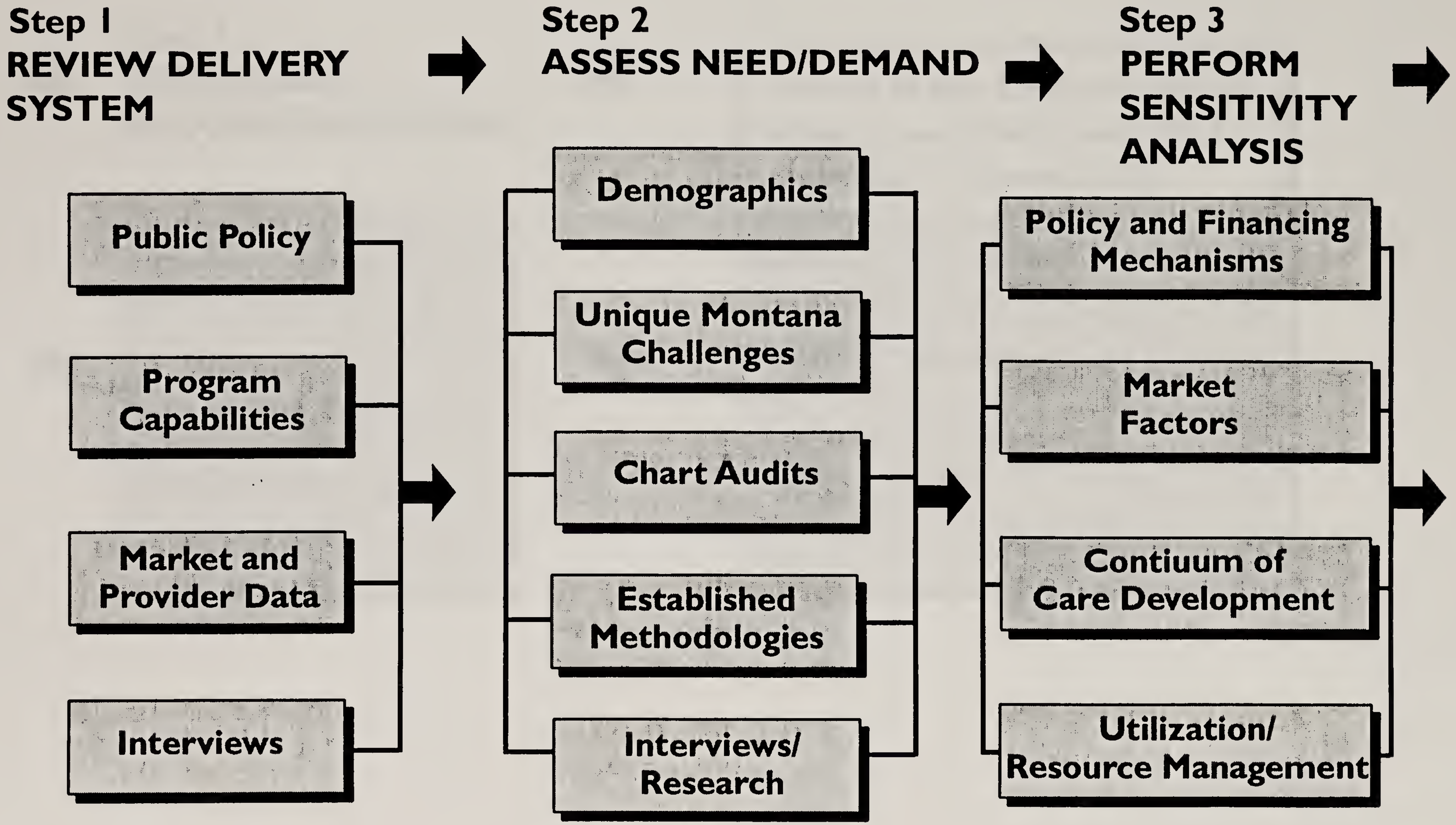
- Two interim progress meetings with a multi-disciplinary team of state agency representatives and providers.
- Interviews with:
    - State agency representatives.
    - Inpatient and residential service providers.
    - Select other knowledgeable individuals.
- Review of State and Regional mental health plans.
- Collection and summarization of utilization data.
- Review of the scope of available services.
- Review and summarization of demographic and market data.
- An audit of patient records at inpatient and residential providers to assess the clinical appropriateness of placements.
- Identification of critical issues impacting the need for services.

- Review of research-based demand methodologies that reflect levels of service delivery within other states.

Information collected and analyzed during the needs assessment process, and the Multi-disciplinary Task Force's deliberations on relevant issues, provided the basis for Chi Systems, Inc. to formulate the general and public policy recommendations starting on pages 2-1 and 3-1 of this report.

Chi Systems, Inc. would like to express it appreciation to state agency representatives and providers of child and adolescent mental health services within the State of Montana for their participation in and support of this needs assessment process, and their confidence in our services.

Engagement Process to Conduct a Mental Health Needs Assessment for the Child and Adolescent Population of Montana



Step 1
REVIEW DELIVERY SYSTEM

- Public Policy
- Program Capabilities
- Market and Provider Data
- Interviews

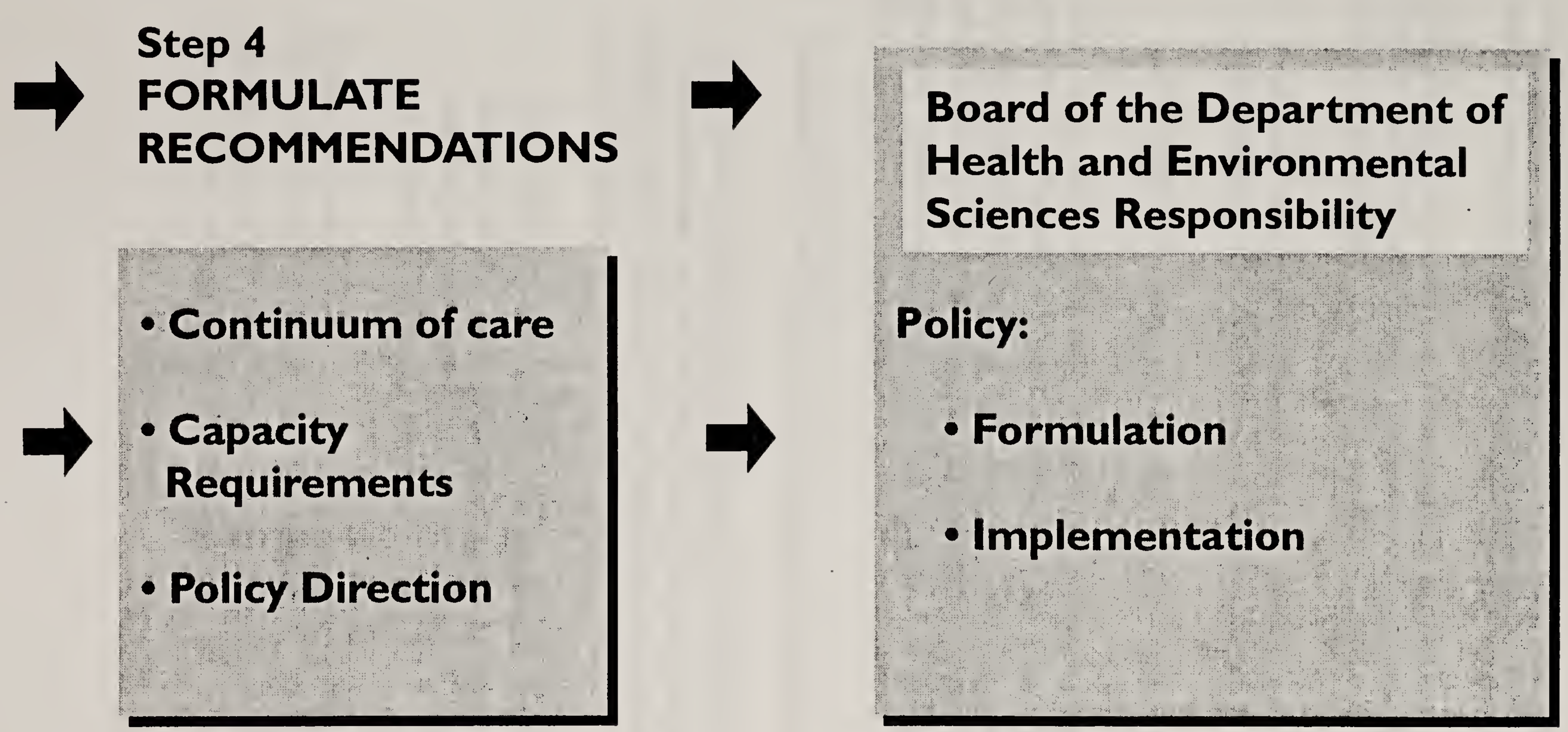
Step 2
ASSESS NEED/DEMAND

- Demographics
- Unique Montana Challenges
- Chart Audits
- Established Methodologies
- Interviews/ Research

Step 3
PERFORM SENSITIVITY ANALYSIS

- Policy and Financing Mechanisms
- Market Factors
- Contiuum of Care Development
- Utilization/ Resource Management

Engagement Process to Conduct a Mental Health Needs Assessment for the Child and Adolescent Population of Montana (continued)



Step 4
FORMULATE
RECOMMENDATIONS

- Continuum of care
- Capacity Requirements
- Policy Direction

Board of the Department of Health and Environmental Sciences Responsibility

Policy:

- Formulation
- Implementation

Recommendations

Based on the chart audit, interviews, analyses, and observations to date, Chi Systems, Inc. recommends that the State of Montana:

- Fully develop an integrated continuum of child and adolescent mental health services (particularly within the lower levels of care) to provide and manage quality, and cost-effectively care to public patients':
    - Access to care should be improved particularly within the rural communities.
    - Care should be case managed across the full continuum of services.
- Until the continuum of care is more fully developed and access to services is enhanced, at least 84 inpatient hospital and 167 residential beds (potentially including a limited portion for therapeutic group home beds) should be maintained and accessible to meet the needs of public patients. (Additional beds are also needed for private pay patients.) This conclusion is based on:
    - Current high utilization of existing residential facilities.
    - Chi Systems' chart audit findings indicated that nearly all admissions are appropriate, that patients in inpatient and residential settings have high acuity, require intensive services and high levels of supervision:
        - More patients should be admitted and treated with longer lengths of stay in inpatient hospital settings (i.e., some residential patients could benefit from a portion of their treatment at an acute hospital setting).
    - Review of research-based methodologies; most notably the North Carolina model, adjusted for the percent of Montana children and adolescents in poverty, which suggests a need for approximately that number of intensive treatment slots.

  - It appears that based on the inadequate development of less acute portions of the continuum of care, inpatient and residential capacity are likely to be capacity constrained and, therefore, access to patients in need may be potentially denied.

- Distribution of residential bed capacity within the five planning regions is not proportional to the needs of the populations within those regions. Specifically, regions I, II, and V appear to have inadequate capacity (both now and in the future based on existing/planned capacity).

- Adequate funding for acute psychiatric care in freestanding hospitals should be reinstated to meet the need for inpatient hospital services:

  - Access to care would be greatly improved for the public population in the western half of Montana.

  - By making acute care accessible, the acuity level at the residential level could be reduced and utilization and associated costs of residential services could be reduced.

  - Expanded reimbursement will be essential for many inpatient hospital providers to make it financially feasible to continue to offer this inpatient level of care.

  - Proper utilization of inpatient hospital services in combination with other components in the continuum of care will reduce the need and cost of residential services while improving the quality of care and potentially reducing recitivision.

- Reevaluate and maximize use of federal Medicaid dollars for psychiatric services for children:

  - Montana's definition of seriously emotionally disturbed children and adolescents should be broadened in order to include those individuals who are in the custody of the state and who are receiving services that are being funded by 100% General Fund (i.e., some sexual offender and some conduct disorderly youth).

  - Out-of-state placements should be minimized in order to support Montana providers and in-state service development.

- The 8.2 million dollars contained in the governor's budget for the Community Impact Program should be leveraged wherever possible to take advantage of the federal Medicaid match. This program will greatly help in the development of the lower end of the continuum. The higher end of the continuum also needs to be funded so that the entire delivery system can be effective both in terms of long-term cost containment and the delivery of services.

Public Policy Implications

REQUIREMENTS FOR SUCCESS

Based on Chi Systems' experience, the following are requirements for successful public mental health service policy:

- Appropriate, least restrictive, and most cost-effective care.
- Strong referral network and crisis services to expedite early intervention.
- Intensive case management across a full continuum of services:
  - Including a coordinated approach to dual diagnosis patients.
- Collaborative approaches between providers, state agencies, law enforcement agencies, courts and school systems.
- Flexible (individualized) approaches to diagnosis, treatment and after-care services.
- Adequate funding to meet resource requirements
- Well designed incentives and appropriate levels of risk sharing among payors and providers.
- Predictable budgeting/spending of public funds to ensure fiscal accountability at state and regional levels.

IMPLICATIONS

Development and implementation of Montana's public policy initiatives should consider the following recommendations:

- Incentives should be designed into public policy that will promote full development and integration of the continuum of mental health services:
  - Experience in other states has indicated that the continuum must be fully developed before more cost effective utilization of resources can be achieved. Conversely positioning/appearing to create

incentives to lower cost prior to the continuum being adequately developed is not in the public's or patient's interest:

    - Emphasis should be on community-based systems/service development.

  - Care should be coordinated and aggressively case managed at all levels within the continuum.
  - A strong referral network and crisis services should be available to expedite early and effective patient care and intervention.
  - Adequate capacity of higher acuity services (inpatient and residential) should be available as needed to meet the needs of patients.
  - Funding should recognize that full development of the continuum of care will likely require three to five years.

- Adequate funding should be available to support needed:
  - Development and operation of a comprehensive case management system.
  - Services at all levels of care with capacities adequate to meet patient needs.
  - Public education, prevention services, and early case intervention.
- Utilization review and funding policies should be designed to:
  - Encourage selection of the most appropriate setting for care.
  - Encourage cost-effective utilization of the continuum of service.
  - Reduce recidivism.
- Distribution of services on a geographic basis (most notably residential services) should be considered in future bed/service allocation decisions.
- Development of manage care initiatives under Medicaid waivers should:

  - Include sufficient systems to monitor performance of the contracting entity and affiliated providers to ensure that needed services are provided and that services are of adequate quality.
  - Ensure selection of the most appropriate settings for patients.
  - Allow predictable budget and spending of public funds.
- Outcome studies should be utilized to measure the performance of providers/programs that deliver care to public patients.
- Capacity planning should also consider the need to accommodate privately insured patients and patients from other states that are placed in Montana-based facilities.

Summary of Current Literature: Child and Adolescent Mental Health Needs

Although there are no definitive studies that permit a simple formula based approach to predicting mental health needs for child and adolescent populations, recent private and government sponsored research provides new insight into this public health problem. In planning public policy and assessing need for services it is important to consider the implications of the following findings:

- There is a much higher prevalence rate of mental health disorders for this population than previously estimated.
- A larger percentage of the child and adolescents that have less severe mental health problems do not receive professional treatment for the disorders.
- Ideally, assuming resource availability (that is typically not present), public mental health systems should be expanded to identify and provide/arrange for treatment of these children and adolescents.

  Note: It is assumed by Chi Systems, Inc. that the bulk of these additional services (public and private) would ideally be provided cost-effectively in community/family based programs.

At the conclusion of this chapter of the report, a listing of sources that are referenced is provided. A summary of the findings relevant to assessing Montana's mental health needs for children and adolescents is as follows:

SCOPE OF THE PROBLEM

- No national epidemiological studies have been conducted in this country that conclusively provide valid indicators of either the prevalence or incidence of mental disorders among children and adolescents. (1)
- Reviews of documented studies in the United States and studies conducted outside the United States indicate that the number of children with diagnosable disorders could range as high as from 17.6 to 22%: (2)(3)(4)(5)

  - This would be approximately 41,600 to 52,000 Montana children and adolescents.

- There are many definitions of "seriously emotionally disturbed" (SED), which is one reason for the range of estimates for this population.

FEDERAL ESTIMATES

- In 1993, the federal government established the following definition, which is used to award federal block grant funds for community mental health services:

  - Pursuant to Section 1912(c) of the Public Health Service Act, as amended by Public Law 102-321 "children with a serious emotional disturbance" are persons:

    - from birth up to age 18
    - who currently or at any time during the past year,
    - have a diagnosable mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria specified within DSM-III-R,
    - that resulted in functional impairment which substantially interferes with or limits the child's role or functioning in family, school, or community activities.

    Source: Federal Register, May 20, 1993

- The prevalence of SED, based on the federal definition is probably around 8.5% to 11% of the population of children aged between 4 and 17:

  - This estimate is the most current in use at the National Institutes of Mental Health, and is based on a report submitted in March 1994. (5)

  - This would represent approximately 20,000 Montana children and adolescents:

    - Assuming 8.5% of all children under age 18.

MONTANA'S HISTORICAL CONTEXT

- These prevalence numbers are significantly higher than the figures historically used by Montana state agencies for planning and evaluating services. There are a variety of reasons for the difference, including the following:
  - The definition of SED used by Montana and MRM is more stringent than the federal definition.
  - Estimates relied on (approximately 2% to 4% of the child and adolescent population) represent an average of estimates based on service provided rather than need. These estimates are also from an older study which has subsequently been revised to be more inclusive of a larger population of disturbed youth.
  - There has not been a widely accepted position that a greater proportion of children in Montana than in other states live in poverty, thus contributing to their mental health status.

OTHER FACTORS TO CONSIDER

- There are a variety of risk factors which have been correlated with prevalence of SED. (6) These factors include:
  - Mother unemployed
  - Father unemployed
  - Child not living at home
  - Child has had one or more foster homes
  - Mother unmarried
  - Mother's education 8th grade or less
  - Father's education 8th grade or less
  - Family poverty
  - Unsafe neighborhood

  - Unsafe school
  - Four or more children in the home
  - Impoverished home environment
  - Reared by a single parental figure
  - Step-parent in the home

- It is clear from these sources of adversity that a high percentage of Montana youth is at risk:
  - In addition, it is estimated that up to 40% of Montana's population are living within 200% at the federal poverty line. This may also suggest an even greater need for additional services to meet the needs of this low income population.
- Another widely recognized risk factor, being sexually abused, is more difficult to quantify for an entire population (sexual abuse and youth sex offenders appears to be a major mental health planning issue in Montana).
- Data is currently being analyzed from a multi-year National Institutes of Mental Health study which will better quantify risk factors:
  - The data should be reported within the year.
- A study involving researchers from throughout the country is currently being administered by the National Institutes of Mental Health to quantify child and adolescent service use, need, outcomes, and costs:
  - One of the primary purposes of this study is to assist states in planning for mental health services.
  - Data will be available in approximately five years.

REFERENCES

(1) Hoagwood, Kimberly and Agnes Rupp. "Mental Health Service Needs, Use, and Costs for Children and Adolescents with Mental Disorders and Their Families: Preliminary Evidence" Mental Health, United States, U.S. Department of Health and Human Services. 1994.

(2) Costello, E.J. Developments in child psychiatric epidemiology. Journal of the American Academy of Child and Adolescent Psychiatry, 28: 836-841, 1989.

(3) Offord, D.R.; Boyle, N.H.; Szatmari, P., et al: Ontario Child Health Study: II. Six-month prevalence of disorder and rates of service utilization. Archives of General Psychiatry, 44:832-836, 1987.

(4) Schwartz-Gould, M.; Wunsch-Hitzig, R.; and Dohrenwend, B. Estimating the prevalence of child psychopathology. Journal of the American Academy of Child Psychiatry, 1982;20:462-76.

(5) Costello, E.J.; Tweed, D.L. A Review of Recent Empirical Studies Linking the Prevalence of Functional Impairment with That of Emotional and Behavioral Illness of Disorder in Children and Adolescents, Report to the Center for Mental Health Services, March, 1994.

(6) Costello, E.J.; Angold, A. et al. The Great Smoky Mountains Study of Youth: II. Functional Impairment and Severe Emotional Disturbance. Paper being prepared for publication, 1994.

(7) Costello, E.J.; Burns, B.J. et al. How can epidemiology improve mental health services for children and adolescents? Journal of the American Academy of Child and Adolescent Psychiatry, 32:6, November, 1993.

Comparison of Montana SED Public Population Size Estimates

Mental Health Planning Regions	1994 Population < 18	Population with Diagnosable Disorder (1)	Federal SED Estimate (2)	Historical Montana Planning Range (3)	Estimated Children/Adolescents in Treatment (4)
I. Eastern	25,922	5,184	2,203	778	
II. North Central	42,578	8,516	3,619	1,277	
III. South Central	49,166	9,833	4,179	1,475	
IV. Southwestern	53,657	10,731	4,561	1,610	
V. Northwestern	65,194	13,039	5,541	1,956	
Total:	***236,517***	***47,303***	***20,103***	***7,096***	***2,000***

(1) Studies indicate a range from 17.6% to 22% of children have diagnosable mental disorders. 20% has been assumed.

(2) Based on the federal definition of SED, a recent report to NIMH states that 8.5% to 11% of the population ages 4 through 17 is SED. This document assumes that 8.5% of the population under age 18 is SED.

(3) Montana has generally assumed that 3% of the population under age 18 is SED.

(4) MRM estimates that 2,000 children and adolescents are presently (January 1995) cared for within their system.

Sources:

Statewide Universal Health Care Access Plans, Volume III, Montana Health Care Resources Management Plans, Montana Health Care Authority, 1994.

A Review of Recent Empirical Studies Linking the Prevalence of Functional Impairment with That of Emotional and Behavioral Illness of Disorder in Children and Adolescents, Report to the Center for Mental Health Services, Costello, E.J., Ph.D. and D.L. Tweed, Ph.D. 1994.

Mental Health United States, U.S. Department of Health and Human Services., 1994.

National Planning Data Corporation, 1994.

Chi Systems, Inc., 1995.

Research-Based Methodology: Child and Adolescent Mental Health Service Distribution

Chi Systems, Inc. has utilized a research-based methodology that has been developed and applied to other states to develop a preliminary estimate of need for public sponsored child and adolescent mental health services at various levels within the continuum of services. In reviewing the findings, it is important to note the following:

- When applying use rates from this model (North Carolina model), there is no consideration given to the scope and accessibility of services within Montana's mental health continuum.
- Factors unique to Montana (i.e., the proportionately higher percentage of children/adolescents in poverty, and the vast rural areas of the state with relatively few and small population centers) are not specifically accounted for unless the formula is modified.
- The North Carolina model is a demand-based methodology as contrasted to a true predictor of need:
  - The model assumes that 3% (unadjusted) of the child and adolescent population would seek mental health services.
  - Demand for mental health services (public and private) is dramatically impacted by the accessibility of services as measured by public policy, funding, geographic location of service, social, ethnic, economic, and similar factors.
  - The model does not address the use or need for facilities/services to cover private insured patients and to accommodate out-of-state patients that are placed in Montana facilities.
  - The model assumes an ideal state/delivery system which is not the case in Montana (e.g., inadequate development of the continuum of child/adolescent services and a moderate to high re-admission rate).

Chi Systems, Inc. presents an analysis of the most widely accepted and used demand-based model for public child and adolescent mental health services for purposes of helping to quantify theoretical capacity requirements at various levels within the continuum. This model was designed to measure service

utilization of publicly funded patients within the constraints of a limited state budget. The standard model and an adjusted version is presented for all of Montana on page 4-4. In reviewing this model, the following should be considered:

- Service distribution is based on the North Carolina model developed by Lenore Behar, Ph.D., and in turn, based on work of Robert Friedman, Ph.D.:
    - The model is considered by experts as the best or one of the best models currently available for predicting public service capacity needs.
    - The model is intended to be a guide, but not applied rigidly:
        - Some states have more capacity and higher utilization than this model suggests (example: Virginia's use of residential beds).
        - Levels of therapeutic support provided within the various treatment settings are not necessarily comparable between Montana and North Carolina (i.e., therapeutic group home beds).
    - Montana has used this model as a resource in the past for predicting facility needs.
- Chi Systems believes the North Carolina model needs to be adjusted to more accurately reflect the number of children and adolescents that are in poverty which is higher than North Carolina (i.e., approximately 18% higher):
    - Montana, 19.9%
    - North Carolina, 16.9%

CONCLUSION FROM USE OF THE NORTH CAROLINA MODEL

The modified North Carolina model suggests that the current number of intensive treatment slots (i.e., inpatient and residential beds) in the State of Montana is approximately what is required to serve public patients:

- Beds are required to meet the needs of private patients.
- Until the continuum of care is fully developed, the optimal distribution of beds among the various levels of care cannot be precisely determined:
  - Some portion of the intensive treatment slots may be appropriately provided in a therapeutic group home setting.
- Based on the North Carolina model, the number of public inpatients is lower than would be anticipated and the number of public residential patients is approximately what would be expected.
- Due to limitations in funding for care in freestanding hospitals, too few acute hospital beds are available to public patients.
- If public need is met, there are few, if any, residential beds available for private pay/commercial patients.

Theoretical Capacity Need for Montana
Public Child/Adolescent Mental Health Service Based on the North Carolina Model

Service Modality	NC Public Beds/ Slots (1)	Public Use Rate (2)	Unadjusted Model (3)	Public Need Adjusted for Montana Poverty Level (4)	Current Licensed Beds Available to Public Patients	Percent of Public Need Met by Available Beds
Acute Hospital (5)	506	1.78	71	84	31 (9)	37%
Residential (RTC) (6)	1,012	3.55	142	167	163	102% (10)
Subtotal	1,518	5.33	213	251	194	
Therapeutic Foster	506	1.78	71	84		
Respite and Crisis	253	0.89	36	42		
Total 24 Hour Care	2,277	8.00	320	377		
Day Services	4,553	15.98	639	751		
Home-Based Services	2,530	8.88	355	417		
Outpatient Treatment	15,178	53.26	2,130	2,503		
Case Management	3,794	13.31	532	626		
Total Outpatient	26,055	91.43	3,656	4,297		

Population Assumptions	Total <18	% in Poverty	<18 in Poverty
North Carolina, 1993 (7)	1,686,500	16.9%	285,000
Montana, 1994 (8)	236,517	19.9%	47,000

- Too few acute hospital beds are available to public patients.
- Additional capacity is probably required to meet the needs of private patients.

2/10/95: SA0924/CHI SYSTEMS/BRR/SHODAIR/PR2/SERVDIST.XLSN. Carolina

Notes

(1) This is an estimate of NC public capacity based on application of L. Behar's "NC Model" to N. Carolina. Note: To reduce the need for inpatient and residential placements, North Carolina has developed extensive community- based mental health services including: intensive family treatment, crisis outreach, day treatment and outpatient therapy.

(2) Beds/slots/1,000 population age <18 in poverty.

(3) Assumes that the Montana poverty rate is the same as the North Carolina poverty rate (16.9%).

(4) Assumes a 19.9% poverty rate. Chi Systems believes this adjustment is required to apply this model to the Montana population.

(5) Mental health experts widely agree that hospitalized youngsters should be treated in dedicated child or adolescent programs rather than general/adult programs.

(6) This category includes the North Carolina model's therapeutic group home beds which are typically used in lieu of residential treatment beds by providers in that state.

(7) Population figures are for 1993; % in poverty based on 1990 census.

(8) Population figures are for 1994; % in poverty based on 1990 census.

(9) Not all of the 104 licensed inpatient hospital beds are in use and some are not available to publicly sponsored youth (54 beds). Not all beds are available to children; some programs accept only adolescents.

(10) Public need provides little capacity for private pay and out-of-state placements.

Sources:

Behar, Lenore B, Ph.D., et al., "Distribution and Costs of Mental Health Services within a System of Care for Children and Adolescents", Administration and Policy in Mental Health, Vol. 20, No. 4, March 1993.

National Planning Data Corporation, 1994.

CACI

Chi Systems, Inc., 1995.

Current Utilization as a Predictor of Need

Current and historic utilization of mental health services also provides a basis for evaluating need for services. Using current utilization as a predictor of need, however has its limitations. Chi Systems, Inc. reviewed current utilization and accessibility of child and adolescent mental health services to assist in formulating conclusions. This approach:

- Is also a demand-based methodology that is influenced by the accessibility of services as measured by public policy, funding, geographic location of service, social, ethnic, economic, and similar factors.
- Assumes that patients that need service are identified and provided service.
- Assumes that care provided in the various settings is appropriate.

Note: The chart audit conducted as a part of this needs assessment (see pages 5-1 and 5-2 of this report) was designed to evaluate the appropriateness of current placements.

FINDINGS

- As reflected in the table on page 4-3:
  - Existing residential beds have very high occupancy rates indicating that this component of the continuum is capacity constrained.
  - Existing inpatient beds are currently not well utilized (there are significant financial disincentives for most providers to offer this service to public patients):
    - Freestanding hospital providers (i.e., Rivendell and Shodair) do not qualify for funding and, as a consequence, do not make these beds available to public patients.
    - Units in acute care hospitals are paid on a fixed payment (DRG) basis.
  - There is a mal-distribution of residential beds; most notably a lack of beds in planning regions I, II, and V.

  - Access to inpatient hospital beds is also limited:
    - The 54 inpatient hospital beds in Region IV (Southwestern) are in freestanding facilities and are not available to public patients.
    - Region I (Eastern) also lacks any licensed inpatient hospital beds.

- Changes in reimbursement and programmatic funding for child and adolescent mental health services has dramatically:
  - Decreased the demand for, availability and use of inpatient acute services.
  - Increased the demand for residential treatment services.
- Not all inpatient beds accept children; many are limited to adolescents.
- The continuum of child and adolescent mental health services is at an early state of development and coordination within Montana.

Note: Chi Systems, Inc. believes it will require a focused effort, necessary funding, collaborative working relationships and three to five years to fully develop a continuum of care model that will effectively meet the needs of the public patients.

Current Child and Adolescent Inpatient Provider Beds and Census

Provider	Estimated Beds Availability to Public Patients	Number of Licensed Beds (1)	Estimated Current Average Daily Census	Estimated 1994 Annual Admissions	Estimated 1994 Annual Patient Days	ALOS
Hospital Inpatient (2)						
Deaconess (3)	15	20	10	411	3,288	8.0
Kalispell Regional (4)	10	14	4	54	330	8.0
Montana Deaconess (5)	0	10	Less than 1	141	667	4.7
Rivendell (4)	0	32 (6)	1	31	562	18.0
Shodair	0	22 (6)	4	73	1,603	22.0
St. Patrick (7)	6	6	2	110	783	7.1
Subtotal:	31	104	19-20	820	7,233	8.8
Residential (8)						
Rivendell	20	20	20	50	137	137.0
Shodair	44	44	39	90	12,125	135.0
Yellowstone (9)	99	105	87	148	31,900	235.0
Subtotal:	163	169	146	288	44,162	153.3

(1) Which by license can accept children and adolescents.

(2) Not all inpatient hospital beds/programs are available to children; many are limited for adolescents on a programming level.

(3) A maximum of 15 are staffed.

(4) Rivendell currently operates a maximum of 12 inpatient hospital beds, and Kalispell Regional is reportedly operating 10 beds.

(5) This unit is currently closed, due to the lack of a psychiatrist.

(6) Rivendell and Shodair inpatient hospital beds do not qualify for public funding and thus generally only accept private pay patients.

(7) 26 total beds in the unit, including adult beds.

(8) Excludes Intermountain, which is licensed for residential beds but operates therapeutic group home beds.

(9) 99 are operational.

Sources:

Montana provider telephone interviews, December, 1994 - January, 1995.

Chi Systems, Inc., 1994.

Child/Adolescent Inpatient Mental Health Provider Profile

Provider	Location	Capacity	Patients Served	Primary Service Area	Total Service Area	Payor Mix (1)	Patient Days	ALOS	Waiting List	Admissions	Est. Current ADC
Inpatient Hospital											
Deaconess (General hospital) *June 94 through Jan. 7. ** FY ended 6/30/94.	Billings	20 licensed. Maximum of 15 staffed.	Age 5-18 Cross category	Region III, I	Montana, Wyoming, N. Dakota	35% Medicaid (estimated)	3,288 (est)	8.0 *		411**	10
Rivendell * FY ended 6/30/94.	Butte	32 licensed. 12 staffed.	Children, adolescents	43% from Yellowstone & Silver Bow	Montana & other states	0% Medicaid	562 (3)	18 (3)		31 (3)	1
Shodair Children's Hospital * FY ended 6/30/94. ** 7/94 - 12/94	Helena	22	Children, adolescents	60% from Lewis & Clark	Montana & other states	0% Medicaid	1,603*	22*		73*	4
St. Patrick Hospital, The Providence Center (General hospital) * FY ended 6/30/94.	Missoula	6 beds (adult & adolescent)	Adolescents 12-18	62% from Missoula County	Montana	For partial psych program 65% Medicaid	783*	7.1*		110*	2
Kalispell Regional Hospital, Pathways (General hospital)	Kalispell	14 beds (adult & adolescent)	Adolescents 12-18	Region V	Montana	28% Medicaid (2)	330 (2)	8		54 (2)	4
Montana Deaconess Medical Center (4) *6/93 - 6/94 (General hospital)	Great Falls	10 bed	Age 14-18 approx. 65% depressive psychosis, adjustment reaction, conduct disturbance	74% from Cascade County*	Montana	34% Medicaid*	667	4.7 *		141*	Less than 1

(1) Based on admissions.
(2) Annualized based on data for 11/1/93 - 6/30/94. Psych services only.
(3) Annualized based on data for 1/94 through 11/94.
(4) Unit is currently closed due to lack of a psychiatrist. Patients are admitted to the pediatric unit.

Child/Adolescent Inpatient Mental Health Provider Profile

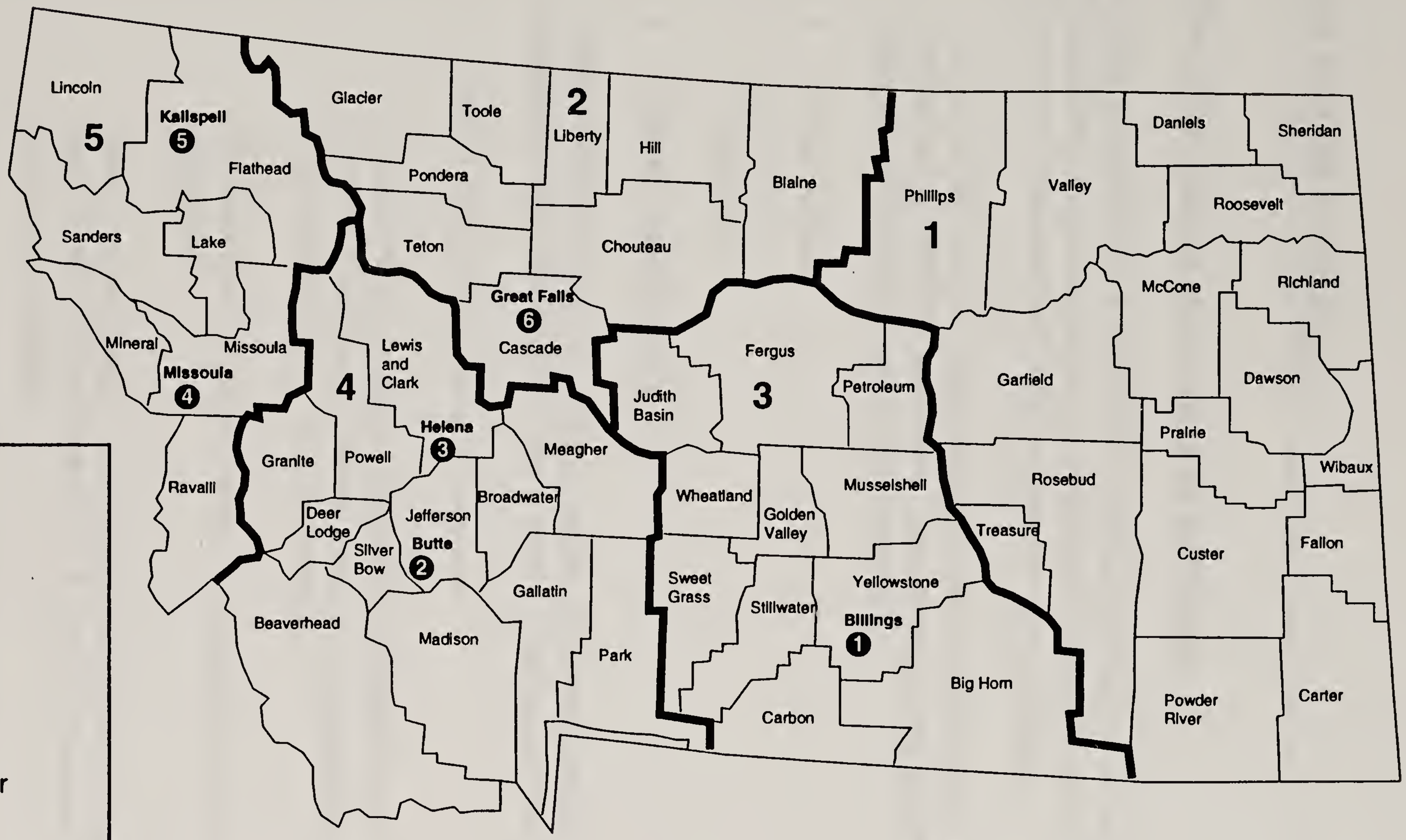
Provider	Location	Capacity	Patients Served	Primary Service Area	Total Service Area	Payor Mix (1)	Patient Days	ALOS	Waiting List	Admissions	Est. Current ADC
Inpatient Residential											
Yellowstone Treatment Center	Billings										
- Intensive care		16 licensed (10 operational)	8-18 years M-F	45% Yellowstone County	Montana & other states	76% Medicaid**					
- SED		70 beds	8-18 years M-F								
- Sex offender		19 beds	12-17 years M								
*CY 1994. **FY ended 6/30/94.							31,900*	235*	Typically 15-20	148*	87
Shodair Children's Hospital	Helena			30% from Lewis & Clark	Montana & other states	77% Medicaid**					
-Sexually reactive		18	Under 13 M-F					200			
-Sex offender		18	10 - 18 years M-F					82			
-Hospital based		8	Under 18 M-F					53			
* FY ended 6/30/94. **7/94 - 12/94.							12,125*		Typically 14	90*	39
Rivendell	Butte	20 beds	Children, adolescents	Region IV	Montana & other states	67% Medicaid*	8,291 (3)	137		50 (3)	20
* FY ended 6/30/94.									Typically 6		

(1) Based on admissions.

(2) Annualized based on data for 11/1/93 - 6/30/94. Psych services only.

(3) Annualized based on data for 1/94 through 11/94.

Child and Adolescent Inpatient and Residential Providers


Lincoln
5
Kalispell
❺
Flathead
Sanders
Lake
Mineral
Missoula
Missoula
❹
Ravalli
Glacier
Toole
2
Liberty
Hill
Blaine
Phillips
1
Valley
Daniels
Sheridan
Roosevelt
Pondera
Teton
Chouteau
Great Falls
❻
Cascade
Lewis and Clark
4
Helena
❸
Granite
Powell
Deer Lodge
Silver Bow
Butte
❷
Jefferson
Broadwater
Meagher
Beaverhead
Madison
Gallatin
Park
Judith Basin
Fergus
3
Petroleum
Wheatland
Golden Valley
Musselshell
Sweet Grass
Stillwater
Yellowstone
Billings
❶
Carbon
Big Horn
Treasure
Rosebud
Garfield
McCone
Richland
Dawson
Prairie
Wibaux
Custer
Fallon
Powder River
Carter

KEY

Governor's Planning Regions
1 - Eastern
2 - North Central
3 - South Central
4 - Southwestern
5 - Northwestern

❶ Deaconess Medical Center
Yellowstone Treatment Center

❷ Rivendell

❸ Shodair Children's Hospital

❹ St. Patrick Hospital

❺ Kalispell Regional Hospital

❻ Montana Deaconess Medical Center

Chart Audit Findings

GENERAL FINDINGS AND INTERPRETATIONS

A chart audit at all Montana providers with licensed inpatient and residential beds for children and adolescents was conducted to determine the appropriateness of current patient placement in these settings.

- A total of 105 records were reviewed between December 11 and December 15, 1994 (for additional details regarding structure and approach to the audit, refer to Appendix B):
    - 36 residential
    - 63 inpatient
    - 6 partial hospitalization
- Nearly all (97%) of the inpatient and all of the residential care admissions that were review were appropriate based on audit criteria:
    - The patient population was very sick:
        - Patients were found to manifest syndromes such as conduct disorders, anti-social behaviors, sexual aggressions, substance abuse, suicidalness, and depression.
        - Patients had multiple reasons for admission and multiple diagnoses.
        - Family relationships and living arrangements were typically very stressful/dysfunctional. A history of sexual and physical abuse was common.
        - There appeared to be an unusually high proportion of youth sex offenders in the system.
        - Interestingly, there were few children and adolescents with diagnosed psychosis encountered during the audit.
    - Multiple placements and high levels of recidivism were apparent in the cases reviewed.

  - Alternative services were not readily available and after-care options were limited.

- The relative lack of available services at lower levels of care exacerbates the need to utilize higher acuity services (i.e., inpatient acute and residential services):
  - Residential service is the current modality of choice within Montana to handle these problem children and adolescents.
  - Placement of patients in lower levels of care where continuity of care and case management can effectively occur is limited:
    - Prevention and early intervention services are not adequately developed.
    - Geographically remote/rural communities offer even less treatment alternatives and disposition options.
  - Patients are often recycled back to inpatient and residential services due to an inability to effectively transition back to the community and/or due to failed placements at lower levels of care.

- Increases in the intensity of service may be beneficial:
  - Inpatient stays were generally very brief, offered limited opportunity for therapeutic intervention and emphasized stabilization:
    - Benefit could be obtained for select patients from additional use of inpatients services (i.e., increased admissions and increase lengths of stay).
  - Residential services could provide more intense therapeutic intervention which might reduce lengths of stay:
    - Improvement in GAF scores from admission to discharge was frequently limited.

- More emphasis on family treatment and participation in the child/adolescents treatment may be beneficial.

- Integrated treatment approaches should be emphasized for dual diagnosis patients (i.e., psychiatric and substance abuse patients).

Appendices

Appendix A:
Chart Audit Data

Mental Health Needs Assessment

Chart Audit Profile - Volume and Type of Records Reviewed (1)

Dates Conducted: December 11, 1994 - December 15, 1994

Setting	# of Records Reviewed
Residential	36
Inpatient	63
Partial	6
Total:	***105***

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(1) Chart audit conducted on December 11 through December 15, 1994 in the following facilities: Deaconess, Kalispell Regional, Montana Deaconess, Rivendell, Shodair, St. Patrick, and Yellowstone.

Sources: Chi Systems, Inc., 1995.

Mental Health Needs Assessment

Chart Audit Profile - Age and Sex Distribution by Setting (1)

			Sex			
			Male		Female	
Setting	Number	Percentage	Number	Percentage	Number	Percentage
Inpatient						
Child (<= 12)	18	29%	15	41%	3	12%
Adolescent (< 18)	45	71%	22	59%	23	88%
Subtotal:	***63***	***100%***	***37***	***100.0%***	***26***	***100.0%***
Residential						
Child (<= 12)	11	31%	10	50%	1	6%
Adolescent (< 18)	25	69%	10	50%	15	94%
Subtotal:	***36***	***100%***	***20***	***100.0%***	***16***	***100.0%***
Partial						
Child (<= 12)	2	33%	0	0%	2	100%
Adolescent (< 18)	4	67%	4	100%	0	0%
Subtotal:	***6***	***100%***	***4***	***100.0%***	***2***	***100.0%***
Total Charts Reviewed	**105**		**61**		**44**	

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1) Chart audit conducted on December 11 through December 15, 1994 in the following facilities: Deaconess, Kalispell Regional, Montana Deaconess, Rivendell, Shodair, St. Patrick, and Yellowstone.

Sources: Chi Systems, Inc., 1995.

Mental Health Needs Assessment

Chart Audit Profile - Locations and Programs (1)

Facility	City	Programs
Deaconess	Billings	Inpatient
Rivendell	Butte	Inpatient and Residential
Shodair Children's Hospital	Helena	Inpatient and Residential
St. Patrick Hospital, The Providence Center	Missoula	Inpatient
Kalispell Regional Hospital	Kalispell	Inpatient
Montana Deaconess Medical Center	Great Falls	Inpatient
Yellowstone Treatment Center	Billings	Residential

(1) Chart audit conducted on December 11 through December 15, 1994 in the following facilities: Deaconess, Kalispell Regional, Montana Deaconess, Rivendell, Shodair, St. Patrick, and Yellowstone.

Sources: Chi Systems, Inc., 1995.

Mental Health Needs Assessment

Reasons for Admission: Chart Audit Findings (1)

Documental Reasons (2)	Inpatient	Residential	Partial
# of Charts	*63*	*36*	*6*
Suicidal Ideation	20	10	2
Suicidal Attempt	19	4	
Aggression/Destructive	11	21	3
Runaway		13	
School Problems		9	
Thought D/O	7	2	
Sexual Acting Out	3	11	
Substance Abuse		5	
Depressive Sx's	3	3	1
Tantrums/Rages		6	
Legal Charges		3	
Other		2	

- Patients have multiple reasons for admission.

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(1) Chart audit conducted on December 11 through December 15, 1994 in the following facilities: Deaconess, Kalispell Regional, Montana Deaconess, Rivendell, Shodair, St. Patrick, and Yellowstone.

(2) The number listed is the number of times that the problem/reason was listed within the group of charts reviewed. When a reason was part of the patients history it was not counted. (Refer to Patient History table A-5.)

Sources: Chi Systems, Inc., 1995.

Mental Health Needs Assessment

Patient History: Chart Audit Findings (1) (2)

Documented History	Inpatient	Residential	Partial
# of Charts	*63*	*36*	*6*
Sex Abuse	16	24	4
Physical Abuse	10	8	3
Legal Charges	8	12	1
Suicidal Behavior	14	7	2
Sexual Acting Out	4	5	2
Aggression/Destructive	17	3	2
Truancy/School Problems	30	13	6
Runaway	13	5	1
Dysfunctional Family/Parent	15	23	6
Substance Abuse	16	9	2
Fire Play/Setting	3	7	
Depressive Sx's		4	
Parent Child Problem	13		
Self Mutilation	13		
Cruelty to Animals	3		

- **Majority of patients in these settings have extensive histories.**

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(1) Chart audit conducted on December 11 through December 15, 1994 in the following facilities: Deaconess, Kalispell Regional, Montana Deaconess, Rivendell, Shodair, St. Patrick, and Yellowstone.

(2) The number listed is the number of times that the problem/reason was listed within the group of charts reviewed. When a reason was listed as the basis for admission, it was not included in the history (refer to "Reason for Admission" page B-4).

Sources: Chi Systems, Inc., 1995.

Patient Diagnoses: Chart Audit Findings (I)

Diagnosis	Inpatient		Residential		Partial	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
# of Charts	63	63	36	36	6	6
Attention Deficit/Hyper Act. D/O	4	12	5	5	1	
Conduct D/O	5	7	4	8	1	
Depression	27	8	8	8	2	2
Thought D/O	6			2		
Polysubstance	1	17		9		2
Post Traumatic Stress D/O	2	6	9	6	1	3
Adjustment D/O	9	1				
Language D/O				1		1
Learning D/O		9		6		1
Developmental D/O		4				
Bi-polar Attact D/O	4	11		1		
Oppositional Defiant D/O	1	6	7	9		1
Personality D/O		9		5		
Borderline Intelligence				3	1	

Patient Diagnoses: Chart Audit Findings Continued (1)

Diagnosis	Inpatient		Residential		Partial	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
# of Charts	63	63	36	36	6	6
Fetal ETOH				5	1	
Anxiety D/O			2	1		
Sexual D/O			1	1		
Pervasive Devel D/O				1		
Intermittent Explosive D/O						
Other	4	5				
Average # of Secondary Diagnoses		1.5		2.0		1.7

■ **Patients in these settings have multiple diagnoses.**

(1) Chart audit conducted on December 11 through December 15, 1994 in the following facilities: Deaconess, Kalispell Regional, Montana Deaconess, Rivendell, Shodair, St. Patrick, and Yellowstone.

Sources: Chi Systems, Inc., 1995.

Mental Needs Assessment

Previous Treatment: Chart Audit Findings (1)

Previous Treatment	Inpatient	Residential	Partial
# of Charts	*63*	*36*	*6*
No prior treatment	0	2	1
Single prior inpt.	10	12	2
Multiple prior inpt.	5	11	
Single prior resid.	4	11	
Multiple prior resid.	0	2	
Single prior partial	5	8	2
Multiple prior partial	1	1	
Single prior group home	5	7	2
Multiple prior group home	2	2	
Single prior foster home	1	7	1
Multiple prior foster home	2	6	

(1) Chart audit conducted on December 11 through December 15, 1994 in the following facilities: Deaconess, Kalispell Regional, Montana Deaconess, Rivendell, Shodair, St. Patrick, and Yellowstone.

Sources: Chi Systems, Inc., 1995.

Mental Needs Assessment

Patients Meeting Admission Criteria (1)

Admission Criteria	Inpatient	Residential	Partial
# of Charts	*63*	*36*	*6*
Met Admission Criteria (2)	61	36	
Did not meet Admission Criteria	2	0	
Percent that Met Criteria	97%	100%	
Number that showed progress during stay	N/A	29	
Percent that showed progress	N/A	81%	

- **Virtually all admissions were appropriate.**
- **Some residential patients showed limited progress.**

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(1) Chart audit conducted on December 11 through December 15, 1994 in the following facilities: Deaconess, Kalispell Regional, Montana Deaconess, Rivendell, Shodair, St. Patrick, and Yellowstone.

(2) Criteria established by Chi Systems to review the appropriateness of patient placements in inpatient and residential services (see Appendix C).

Sources: Chi Systems, Inc., 1995.

Patients' Lengths of Stay and Admission GAF Scores: Chart Audit Findings (1)

Residential

# of Closed Charts	Lengths of Stay # of Patients	Lengths of Stay Days
15	1	1 - 50
	2	51 - 100
	3	101 - 150
	3	151 - 200
	4	201 - 365
	2	366+

Average GAF Score on Admission

34

Average GAF Score on Discharge

41

Inpatient

# of Closed Charts	Lengths of Stay # of Patients	Lengths of Stay Days
56	9	1 - 3
	23	4 - 7
	11	8 - 12
	10	13 - 20
	3	21+

Average GAF Score on Admission

42

Average GAF Score on Discharge

45

(1) Chart audit conducted on December 11 through December 15, 1994 in the following facilities: Deaconess, Kalispell Regional, Montana Deaconess, Rivendell, Shodair, St. Patrick, and Yellowstone.

Sources: Shodair Hospital, 1994.
Chi Systems, Inc., 1994.

Appendix B: Medical Record/Utilization Audit

Medical Record/Utilization Audit

A chart audit at all Montana providers with licensed inpatient and residential beds for children and adolescents was conducted to determine the appropriateness of current patient placement in these settings.

AUDIT PROCEDURE

- The record review was performed by two RNs who specialize in child and adolescent psychiatric nursing.
- The nurses met with clinical personnel to discuss.
  - Services provided.
  - Patients served.
  - Staffing.
  - Other program characteristics.
- The nurses reviewed a minimum of 5% of records of patients who were admitted during the year.
  - This sample included charts from both current and discharged patients.
  - Providers were asked to pull charts which were representative of the age and sex distribution of the patient population, but were random in every other respect.
  - The charts were reviewed according to criteria which are included in the appendix.
- In addition, the nurses reviewed a sample of partial hospitalization records.
- The nurses interviewed at least one current patient at each institution, in order to better interpret the comments on the charts.

- The results of the audit will be reviewed and interpreted by Dr. Philip M. Margolis, a psychiatrist and faculty member of the University of Michigan Department of Psychiatry.

ADMISSION CRITERIA: INPATIENT

Severity of Illness

Clinical Findings

- Deliria and/or mania
- Hallucinations (visual or auditory)
- Total body rigidity or immobility
- Bizarre or delusional behavior
- Acute toxic or withdrawal symptoms
- Destructive behavior (property)
- Significant social withdrawal
- Psycho-physiological disorder
- Inability to perform activities of daily living because of severe psychiatric symptoms (e.g., psychomotor retardation, severe depression, social withdrawal, agitation, anxiety or autistic behavior, etc.).
- Destructive behavior towards self or others

Laboratory

- Positive for barbiturates, narcotics and other toxic agents in comatose or impending comatose patient.
- Lithium level over 2.0 mEq/L
- Abnormal physical or laboratory finding must be accompanied by significant related signs and symptoms.

Other

- DSM-IV diagnosis and a GAF of less than 45.
- Recurrence of severe psychiatric symptoms not responding to outpatient treatment.
- Toxic effects from therapeutic psychotropic drugs

CONTINUED STAY CRITERIA: INPATIENT

- Physician has determined that discharge remains dangerous due to persistence of:
    - Suicidal behavior
    - Manic behavior
    - Debilitating depression
    - Command hallucinations
- Change of diagnosis or treatment approach that necessitates a change of treatment plan and that meets previously stated criteria for hospitalization.
- Medical complications of prescribed treatment.
- Unexpected decrease in level of functioning (e.g., becomes dangerous to self, etc.)
- Comorbid condition complicating treatment.

DISCHARGE CRITERIA: INPATIENT

- Able to function in prescribed non-hospital environment.
- Unresponsive to acute care treatment with no change in condition in last 21 days. Transfer to specialty unit or discharge.
- Able to appropriately control behavior and function cooperatively with others.
- Documented by physician that maximum hospital benefit attained.
- Alternative placement/follow-up care arranged.

ADMISSION CRITERIA: RESIDENTIAL

- A reasonable course of active outpatient treatment has failed to bring about a significant degree of clinical stability or resolution of significant symptoms.
- A reasonable course of active treatment in an acute care setting has failed to bring about sufficient resolution of significant symptoms such that:
    - Continued, intensive skilled interventions could no longer be expected to result in a greater degree of improvement than would a less restrictive setting.
- A reasonable course of active treatment in an acute care setting has resulted in an acceptable degree of clinical stability except that:
    - Maintaining the degree of stability achieved will require a 24-hour structured and supervised setting, with consistent therapeutic intervention from staff in order to maintain an acceptable level of functioning.
- A DSM IV diagnosis (consider Axis I and II) and a GAF of less than 55.

Indicators for Consideration of Residential Programs

- Placement in a residential treatment program may be indicated for children and adolescents with:
    - Chronic behavior problems (e.g., conduct disorder) such as aggression, running away, and/or truancy.
    - Chronic substance abuse
    - Recurring psychosis
    - Self-destructive acts which the family, foster home, and/or community cannot manage or tolerate.
    - Parents demonstrate severely impaired parenting skills toward the child or adolescent.

CONTINUED STAY CRITERIA: RESIDENTIAL

- A plan of active care which specifically addresses symptomatic/dysfunctional areas, provides individualized interventions aimed at reducing or remediating those areas, and which has specific, time-bound expectations of change, and specific discharge criteria.
- The patient behaviors/symptoms, as evidenced by the initial plan of care or by subsequent review of progress, are likely to or are responding to active treatment.
- Demonstrate progress in school environment.
- DSM-IV diagnosis and GAF continues to be less than 55.

DISCHARGE CRITERIA: RESIDENTIAL

- Admission behavior problems significantly improved.
- Alternative placement/follow-up care arranged.
- No longer require continual supervision to maintain an appropriate level of school and social functioning.
- Demonstrates ability to attend school in community:
- GAF at 60 or above.

Appendix C: Planning Issues

Planning Issues

CRITICAL ISSUES

- Demographic considerations:
    - Rural population.
    - Native American population.
    - High percentage of children in poverty.
    - Related transportation problems.
- State residents have historically been:
    - Independent.
    - Self-sufficient.
    - Conservative.
- Historical lack of emphasis and incentives on developing the continuum of care.
- Fragmentation of state agency initiatives.
- Availability of funding to support:
    - Regional delivery system development and case work.
    - MRM program development.
- Responses of providers to financial and other incentives.
- Potential development of a managed care initiative for public patients.

KEY QUESTIONS TO CONSIDER IN EVALUATING NEED

- How many children and adolescents are at risk or known to be seriously emotionally disturbed?
- Are there children and adolescents that are not receiving care they need? If so, what type and level of service?
- What deficits exist in the continuum of care and in what locations?
- Are current service levels being used appropriately?
- To what degree would an expanded continuum of care reduce the need for higher levels of care?
- What types and how much care is being provided out-of-state?
- How much money is available? What is feasible from a financial basis?

PUBLIC SPONSORED MENTAL HEALTH MANAGED CARE INITIATIVES

State Objectives

- Consolidate public funds for services to create a more comprehensive and coordinated system.
- Expand "Medicaid" coverage to 200% of the poverty line (1115 waiver request) for mental health services.
- Stabilize state expenditures and inflationary pressures.
- Transfer risk to managed care companies to promote:
  - Intensive case management.
  - Development of the continuum of care at lower levels.
- The development of new and more flexible services which will provide greater access to care.
- Target date: Second quarter of 1996.

Implications

- Care will need to be managed in order to assume financial risk.
- Current systems of case management and service coordination will be replaced/modified by the managed care company.
- The managed care payor will have incentives to maximize cost-effectiveness of care.
- Competition for contracts will promote cost and price sensitivity of provider services.
- Case management will be rigorous.
- Over time, managed care firms are likely to transfer risk to providers who will want predictable use rates.
- Availability and access to an expanded continuum of care is expected to increase as payors and providers respond to incentives.
- Providers who are at financial risk for care delivery will need to rely on goal estimates of the demand for service and reported patient volumes.
- State responsibility will include monitoring performance and contract compliance to ensure patients' needs are being met.
- Montana should establish quality and outcomes standards and measure actual performance to ensure:
  - Accountability of providers.
  - Adequacy of program design and management.

Appendix D:
Historical Public Policy: Child and Adolescent Mental Health Services

Historical Public Policy: Child and Adolescent Mental Health Services

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Historical, current and future public policy can be described as a series of state actions which caused both desired and undesired results.

DATE: PRIOR TO JULY 1993

Policy:

- Medicaid cost-based reimbursement for children in free-standing psychiatric hospitals.
- Medicaid reimbursement by DRG for children in psychiatric units of general acute care hospitals.
- "Family of One" legislation stating that any child under the age of 21 placed out of their home in a private inpatient hospital or residential treatment center qualified for Medicaid reimbursement:
    - Approximately 700 annual admissions were covered.

Results:

- Growth in number of inpatient providers, beds, and patients.
- Increased access to inpatient and residential services:
    - Questions regarding the appropriateness of removing some of these children from their families and communities.
- Growth in state expenditures for inpatient psychiatric care.

DATE: JULY 1993

Policy:

- Elimination of the "Family of One" rule.
- Elimination of Medicaid funding for inpatient psychiatric treatment at free-standing private psychiatric hospitals.
- Creation of a case management systems (MRM) for psychiatric patients covered by Medicaid:
  - Out of state placement is discouraged.

Results:

- Decrease in inpatient psychiatric beds overall:
  - Increase in child and adolescent beds in general acute care hospitals.
  - Decrease in inpatient psychiatric beds in freestanding facilities.
- Increase in residential beds:
  - Conversion of free-standing provider beds to residential beds.
- Development of MRM (Managing Resources Montana) infrastructure:
  - Utilization review requirements for participants:
    - Pre-admission and concurrent review.
    - Annual on-site inspections of care.
  - Community mental health centers providing case management and outpatient treatment.
- Increase in residential inpatients.
- Decrease in inpatient psychiatric patients.

- Decrease in patients treated out of state.
- Substantial reduction of expenditures for inpatient psychiatric treatment.
- Increase in administrative expenses of providers and associated agencies (such as the Indian Health Service).
- Higher acuity of patients at lower levels of care.
- Development of community services in more populated areas.
- Decrease in inpatient lengths of stay.
- Increase in residential lengths of stay and corresponding expenditures for this level of care.

DATE: FUTURE

- Proposed increase in funding for MRM and the department of family services through community impact funding.
- Through 1115 waiver with HCFA, transfer of risk to a managed care company anticipated in 1996.

Appendix E:
Interview Findings

Interview Findings

Individuals from state and federal agencies as well as from providers with inpatient, residential, or therapeutic group home beds were interviewed to gain their insights and opinions regarding current services for SED children and adolescents, the need for various types of service, and state policy. Interviews were conducted in person or by telephone by either Dan Riina, Principal of Chi Systems or Mary Rasmusson, Senior Consultant. Individuals who were interviewed are listed below.

Name	Institution/Agency
Charles Aagenes	Department of Health and Environmental Services
Mary Ann Akers	Treatment Services Unit Department of Family Services
Libby Artley	Director of Psychiatric Services Deaconess, Billings
Jane Bailey	Vice President of Patient Service/COO Montana Deaconess, Great Falls
Peter Blouke	Director Department of Social and Rehabilitative Services
Jack Casey	Administrator Shodair Hospital
Nancy Ellery	Administrator, Medicaid Services Division Department of Social and Rehabilitation Services
William Fulton	Medical Director Shodair Children's Hospital
Gary Henry	CEO Rivendell
Salley Hetrick	Principal Health Management Associates

Name	Institution/Agency
John Honsky	Coordinator, Adolescent Partial Program St. Patrick Hospital
Hank Hudson	Director Department of Family Services
Rick Johnson	Administrative Manager Pathways Treatment Center
Randy Mee	Director, Restorative Services Montana Deaconess, Great Falls
Marlene O'Connell	Manager, Psychiatric Unit Montana Deaconess, Great Falls
Kathy Ostrander	Regional Administrator, Southwestern Region Department of Family Services
Betty Petek	Regional Administrator, South Central Region Department of Family Services
Christine Peterson	MH/SW Program Officer Indian Health Service
Randy Poulsen	Medical Services Division Department of Social and Rehabilitative Services
Bob Runkel	Administrator, Division of Special Education Office of Public Instruction
Loren Soft	CEO Yellowstone Treatment Center
Pete Surdock	Mental Health Division Department of Corrections and Human Services
Dennis Taylor	Deputy Director/Chief of Staff Department of Justice
Shirley Tiernan	Regional Administrator, Eastern Region Department of Family Services

Name	Institution/Agency
Larry White	CEO St. Patrick Hospital
John Wilkinson	Administrator Intermountain Children's Home

A summary of the interviews follows.

STATE AGENCY PERSPECTIVE

- Inpatient (acute hospital and residential) services are overutilized to the exclusion of community-based services.
- The continuum of mental health services for children and adolescents needs to be expanded.
- State funding for services needs to be more predictable, and a decrease in the growth of spending must occur.
- A Medicaid carve out (under an 1115 waiver request) is the best way to manage mental health services and curtail the growth of spending for public patients:
    - Some reservations exist about incentives to provide less services.
- MRM (Managing Resources Montana) has made significant progress in organizing a decentralized team approach to community based services:
    - Additional progress is needed.
    - MRM needs additional funding to organize/manage the service delivery system.
    - MRM's role is expected to be replaced under a managed care contract.
- The most disturbed children and adolescents are often not accepted by in-state providers.
- Programming at the two juvenile corrections facilities (Pine Hills School and Mountain View) is being modified:
    - SED children and adolescents are not placed in these facilities.
- Residential and inpatient care generally does not provide long-term stabilization of the child or adolescent.

- Regional mental health centers need additional funding to achieve program objectives:
    - Patients that become decertified become a financial burden.
- Availability of services is not consistent across the five planning regions.
- School systems (485 school districts) are negatively impacted by the problem:
    - Special education requirements keep children and adolescents in schools.
    - An estimated 1000 SED children are in special education programs.
    - There are an insufficient number of day treatment sites.
- Conduct disorder and sex offenders represent some of the toughest placement and case management problems.
- The delivery system picks up kids in crisis but is less effective identifying and addressing lower acuity problems.

PROVIDER PERSPECTIVE

- Most felt that there is a need for additional access to inpatient beds and additional residential beds:
    - Patients must be authorized by utilization review two times, so patients who are ultimately authorized for inpatient and residential treatment are perceived to be unquestionably acute enough to warrant that treatment.
- All feel that lower levels of care are lacking and that many types of care are not available outside of the largest cities.
- The majority have noticed a change (such as volume and acuity) in their patient population following the change in Medicaid.

- All mentioned that Montana's low population density makes it unique. Other characteristics that should be considered when evaluating the need for services include (these characteristics were mentioned by one or more interviewees):
    - Attitudes toward alcohol.
    - Large American Indian population.
    - Variability in public policy regarding the best way to provide mental health services (for example, in the family, outside of the family, etc.).
    - Desire of the state to control spending.
- School systems are reluctant to identify SED children because they do not have the resources needed to maintain additional program slots and do not want to be responsible for the cost of providing educational services to children in residential settings.
- Many think that there probably are children who could be moved from the residential setting to lower levels of care, if more of these services were available in their communities.
- Several expressed concern about failed (multiple, inappropriate) placements.
- There is a perception that inpatient care is not part of the continuum of community-based care for SED children.
- There is a general consensus that substance abuse and chemical dependency concerns for the child and adolescent population are not being adequately addressed:
    - Some believe that they are being addressed more effectively than mental health needs.
    - Others believe that CD problems are poorly addressed and children with these problems often become SED patients.
- Many think that MRM will be displaced by managed care.

Appendix F:
Profile of Child and Adolescent Mental Programs Offered by Inpatient and Residential Providers

Profile Of Child And Adolescent Mental Health Programs Offered By Inpatient And Residential Providers

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DEACONESS MEDICAL CENTER, BILLINGS

- Inpatient Unit (evaluation and referral, crisis stabilization, short term care for youth up to age 18, 20 licensed beds)
- Youth Partial Hospitalization Program (day program for school-age children, 12 - 18 slots)
- Attention and Development Disorders Clinic (outpatient treatment for children and adults)

MONTANA DEACONESS, GREAT FALLS

- Inpatient Hospitalization (ages 12 - 18, 10 beds).
- Day Treatment (8 slots).

PATHWAYS TREATMENT CENTER, KALISPELL

- Inpatient Psychiatric (adolescents 12 and over, 14 beds).
- Psychiatric Day Treatment (adolescents 12 and over).

RIVENDELL, BUTTE

- General Psychiatric Unit.
    - Evaluation & Stabilization (crisis care, 1 - 5 days).
    - Transitional Care (transition for patients awaiting placement in residential programs).
    - Native American Inhalant Abuse.

  - Due to funding restrictions on freestanding hospitals, beds are generally not available to public patients.

- Residential Treatment Center:
  - Adolescents, Mentally or Emotionally Disturbed.
  - Children, Mentally or Emotionally Disturbed.
  - Adolescents Male Sex Offender Program.
- Lifeskills Program (24-hour non-therapeutic program providing educational/vocational training for ages 10 - 18 who have been adjudicated for a crime or have failed in school).
- Partial Programs (less than 24 hour observation):
  - Child & Adolescent Services (at Butte):
    - FY 94, 26 slots, 16.5 ADC; Proposed FY 95, 75 slots, 27 ADC
  - Billings Child & Adolescent (Billings):
    - FY 94, 67 slots, 21 ADC; Proposed FY 95, 55 slots, 18 ADC.
  - Turtle Lake Child & Adolescent (Polson):
    - Proposed FY 95, 42 slots, 15 ADC.
  - Bozeman:
    - Referral and screening.
  - Missoula:
    - Referral and screening.
  - Great Falls:
    - Referral and screening.

SHODAIR CHILDREN'S HOSPITAL, HELENA

- Inpatient Psychiatric Programs:
    - Inpatient Psychiatric Services (children to age 18, 22 beds):
        - Includes Sub-Acute - Hospital Based (short term, intensive evaluation/treatment, focus is specific objective based treatment planning, stabilization, and aftercare coordination).
    - Due to funding restrictions on freestanding hospitals, these inpatient beds are generally not available to public patients.
- Residential Programs:
    - Residential Treatment Center (sexually and/or physically traumatized children to age 13, 18 beds).
    - Adolescent Sexual Offender Treatment (24 hour treatment for adolescents ages 10 - 18, 18 beds).
    - Residential Treatment - Hospital Based (8 beds).
- Partial Hospitalization:
    - Hospital-based (children under age 18, 12 slots).
    - Residential-based (children under age 18, 6 slots).

ST. PATRICK HOSPITAL, MISSOULA

- Adolescent Inpatient Services (provided within 6-bed general mental health unit).
- Adolescent Partial Hospitalization.

YELLOWSTONE TREATMENT CENTERS, BILLINGS

On-Campus Programs

- Residential Treatment:
  - Psychiatric Intensive Care (coed, secure, ages 12 - 17, 16 licensed beds).
  - SED Units:
    - 2 girls units (ages 10 - 17, 20 beds).
    - 3 boys units (ages 12 - 17, 30 beds).
    - 1 boys unit (impaired intellectual functioning, ages 12 - 17, 10 beds).
    - Children's treatment unit (ages 8 - 12, 10 beds).
  - Sexual Offender Treatment (boys, ages 12 - 17, 19 beds).

Off-Campus Programs

- Girls Community Home (transitional home, ages 12 - 18, 8 beds).
  - Boys Community Home (transitional home, ages 12 - 18, 8 beds).

Appendix G:
Definition of Continuum of Care

Definition of Continuum of Care

A continuum of services is necessary in order to provide mental health services in the most clinically and cost effective manner. General categories of services and corresponding definitions which are recognized by the state are listed on the following pages.

An inventory of services in the state of Montana is being developed. Although all of the specified services can be found somewhere in the state, not all services are accessible in all areas. In addition, there are state-wide shortages of certain types of services.

- Between July 1, 1993 and June 30, 1994, 25 children were placed in residential beds out-of-state by Managing Resources Montana:
    - In November, there were 8 Medicaid children/adolescents in residential beds out of state.
    - In general, these are adolescents who are sex offenders and/or exhibit severe aggressive/assertive behavior.
- Rural areas do not have the full continuum of community-based services:
    - Inpatient and residential programs are only located in major population centers.
    - The eastern portion of the state has a particularly sparse population and relatively few services.
    - Access and transportation is a problem in these areas.
- Deaconess in Billings is the only provider of acute inpatient mental health services for Medicaid children (under age 12).
- Moderate level therapeutic group homes are not present in many parts of the state:
    - Regions II and V do not have moderate level therapeutic group homes.

Out-of-Home Care

Type of Care	Description
In-Patient Hospital	A service provided in a psychiatric hospital or a psychiatric unit of a community hospital which is used as short-term treatment and crisis stabilization for youth in acute distress, presenting a danger to him or herself or others.
In-Patient Residential	A service provided in a highly secure and licensed psychiatric facility which is not a psychiatric hospital or community hospital unit. Treatment is provided for a moderate to long-term time period. Services are provided within the confines of the facility and may include individual, group and family therapy, chemotherapy, education, behavior management, etc.
Therapeutic Group Care	A mental health service which is provided in a home-like environment and may include all of the services of a residential care facility. The home may have from 2 to 12 youth residing in the home at one time. Supervision of the treatment is provided by a qualified mental health professional.
Therapeutic Foster Care	A service which provides treatment within the context of the treatment provided home with the foster parents serving as the primary therapists and supervision of the treatment by a qualified mental health professional. This service is limited to no more than 2 youth in the home at one time. Support services provided by community resources may include individual and group psychotherapy, chemotherapy, education, parent training, etc.
Supervised Independent Living	A transition service to assist in preparing youth to be able to live on their own including limited supervision of living arrangement and support services. The support services are to enable development of basic skills (e.g., apartment finding, opening checking accounts, budgeting, purchasing clothing, food, utilities, etc.).

Source: "Service Capacity in a Balanced System of Services for Seriously Emotionally Disturbed Children," Friedman, Robert M., Ph.D., 1987.

Community-Based Non Residential Services

Type of Care	Explanation
Home Based	An intensive method of service delivery providing services in the home directed at preventing family dissolution. The service focuses on the family and is directed at strengthening the family by utilizing family members' strengths as basis upon which to build.
Respite Care for Parents	A service provided by trained parent(s) who assume the duties of child caregiving and supervising for a planned brief period thereby providing the parent a break from the constant strain of parenting.
Case Management	A service provided by a single individual which includes coordinating and monitoring of a case plan; identification, location, and arrangement of services in response to identified needs for the child and family; and advocacy.
Day Treatment Services	A service that is frequently provided in a school setting and provides an integrated set of educational, counseling and family interventions which enable the youth to remain in the school and community.
Vocational	Services directed toward gainful employment including career education, vocational assessment, job survival skill training, vocational skill training, work experience, job finding, retention services, and sheltered employment.
Outpatient	Services provided in a variety of community-based settings including individual, group and family therapy; psychotherapy; chemotherapy; behavioral therapy; etc.
Parent Support Services	Services provided to enable parents to care for their child in their own home and/or to participate fully in the treatment of their child. Services may include parent training, parent counseling, parent aides/assistants in the home, homemakers services, etc.

Source: "Service Capacity in a Balanced System of Services for Seriously Emotionally Disturbed Children," Friedman, Robert M., Ph.D., 1987.

Appendix H:
Demographic Analysis

Demographic Analysis

Montana demographics have been analyzed to determine how demographic characteristics will effect the need for mental health services for the child and adolescent population. Tables displaying demographic data follow. Key demographic characteristics are presented below.

POPULATION

- Current and projected population under age 18, in total and by county, is displayed in the tables which follow.
- There are currently 236,500 children and adolescents in Montana.
- In 1999, there will be 253,600 children and adolescents in the state.
- A slightly higher proportion of the Montana population is under age 18 than in the United States overall:
  - 28% of the Montana population is under 18 and 26% of the United States population is under age 18.
  - The proportion of the population under age 18 ranges from 20% in Yellowstone Park to just over 37% in Glacier County.
- The growth rate of the child and adolescent population during the next five years is projected to be slightly higher in Montana than it will be in the United States:
  - From 1994 to 1999, the under 18 population in Montana is projected to grow 7% and the under 18 population in the United States is projected to grow 4%.
- Population density for Montana and other selected states is displayed in following tables:
  - Nearly half of the population of Montana is distributed among 48 counties, each with population under 25,000.
  - Montana's population density is approximately 5.7 residents per square mile:

  - Only Alaska and Wyoming have a lower population densities.
  - The United States has a population density of approximately 72.9 residents per square mile.

INCOME

- 1994 and 1999 median household income by county appears in the following tables.
- 1994 Montana median household income is 27,871 and United States median household income is 34,017:
  - Median household income by county ranges from 17,733 in Carter County (one of the least populous counties) to 36,559 in Rosebud County.
- According to 1990 census data, approximately 20% of Montana children are in poverty:
  - Approximately 18% of U.S. children are in poverty.
  - Montana has the fourteenth highest percentage of children in poverty in the nation.

RACE

- Population by race appears in the following tables.
- Montana has a higher proportion of white residents than the United States:
  - 93% of the Montana population is white and 83% of the United States population is white.

- The proportion of black, Asian, and Hispanic residents in Montana is far lower than it is in the United States:
  - Less than 1% of the Montana population is black, whereas 12% of the United States population is black.
  - Less than 1% of the Montana population is Asian and 4% of the United States population is Asian.
  - 2% of the Montana population is Hispanic and 10% of the United States population is Hispanic
- Most members of the "other" category are American Indians, and this group represents a much higher proportion of the population in Montana than it does in other states:
  - 6% of the Montana population is in the "other" category and 1% of the United States population is in this category.

Current and Projected Population by County

County	1994			1999			Change in Population 1994-1999			
	Under 18	Total	% Under Age 18	Under 18	Total	% Under Age 18	Under 18	% Change	Total	% Change
Beaverhead	2,463	8,832	27.9%	2,607	9,346	27.9%	144	5.8%	514	5.8%
Big Horn	4,458	12,036	37.0%	4,793	14,732	32.5%	335	7.5%	2,696	22.4%
Blaine	2,267	6,776	33.5%	2,232	7,132	31.3%	(35)	-1.5%	356	5.3%
Broadwater	1,067	3,715	28.7%	1,219	4,030	30.2%	152	14.2%	315	8.5%
Carbon	2,278	8,475	26.9%	2,435	8,489	28.7%	157	6.9%	14	0.2%
Carter	386	1,493	25.9%	392	1,383	28.3%	6	1.6%	(110)	-7.4%
Cascade	22,718	81,326	27.9%	23,994	85,047	28.2%	1,276	5.6%	3,721	4.6%
Chouteau	1,551	5,520	28.1%	1,577	5,389	29.3%	26	1.7%	(131)	-2.4%
Custer	3,295	11,936	27.6%	3,394	11,892	28.5%	99	3.0%	(44)	-0.4%
Daniels	521	2,042	25.5%	463	1,646	28.1%	(58)	-11.1%	(396)	-19.4%
Dawson	2,404	8,667	27.7%	2,050	7,257	28.2%	(354)	-14.7%	(1,410)	-16.3%
Deer Lodge	2,321	9,950	23.3%	2,225	8,512	26.1%	(96)	-4.1%	(1,438)	-14.5%
Fallon	910	2,960	30.7%	830	2,698	30.8%	(80)	-8.8%	(262)	-8.9%
Fergus	3,399	12,764	26.6%	3,560	12,483	28.5%	161	4.7%	(281)	-2.2%
Flathead	18,767	66,365	28.3%	21,278	74,018	28.7%	2,511	13.4%	7,653	11.5%
Gallatin	14,063	57,112	24.6%	16,210	66,588	24.3%	2,147	15.3%	9,476	16.6%
Garfield	410	1,339	30.6%	324	1,077	30.1%	(86)	-21.0%	(262)	-19.6%
Glacier	4,599	12,395	37.1%	4,772	14,573	32.7%	173	3.8%	2,178	17.6%
Golden Valley	245	894	27.4%	241	822	29.3%	(4)	-1.6%	(72)	-8.1%
Granite	674	2,543	26.5%	665	2,316	28.7%	(9)	-1.3%	(227)	-8.9%
Hill	5,594	18,109	30.9%	5,809	19,644	29.6%	215	3.8%	1,535	8.5%
Jefferson	2,509	8,577	29.3%	2,730	9,376	29.1%	221	8.8%	799	9.3%
Judith Basin	570	2,238	25.5%	548	1,961	27.9%	(22)	-3.9%	(277)	-12.4%
Lake	6,921	22,910	30.2%	7,535	24,889	30.3%	614	8.9%	1,979	8.6%
Lewis and Clark	14,419	51,876	27.8%	15,995	57,237	27.9%	1,576	10.9%	5,361	10.3%
Liberty	714	2,247	31.8%	698	2,261	30.9%	(16)	-2.2%	14	0.6%
Lincoln	5,388	18,022	29.9%	5,591	18,533	30.2%	203	3.8%	511	2.8%
Montana	236,517	848,637	27.9%	253,617	918,241	27.6%	17,100	7.2%	69,604	8.2%
United States	67,351,421	260,072,897	25.9%	70,975,109	274,272,398	25.9%	3,623,688	5.4%	14,199,501	5.5%

2/1/95: SA0920/CHI SYSTEMS/LMC/SHODAIR/DATABASE/PR1/POPTRACT.XLS

Current and Projected Population by County

	1994			1999			Change in Population 1994-1999			
County	Under 18	Total	% Under Age 18	Under 18	Total	% Under Age 18	Under 18	% Change	Total	% Change
McCone	571	1,981	28.8%	468	1,583	29.6%	(103)	-18.0%	(398)	-20.1%
Madison	1,590	6,196	25.7%	1,631	5,909	27.6%	41	2.6%	(287)	-4.6%
Meagher	493	1,827	27.0%	488	1,683	29.0%	(5)	-1.0%	(144)	-7.9%
Mineral	1,075	3,627	29.6%	1,211	3,952	30.6%	136	12.7%	325	9.0%
Missoula	22,351	86,197	25.9%	24,834	96,028	25.9%	2,483	11.1%	9,831	11.4%
Musselshell	1,038	4,135	25.1%	1,033	3,741	27.6%	(5)	-0.5%	(394)	-9.5%
Park	3,856	15,183	25.4%	4,132	15,416	26.8%	276	7.2%	233	1.5%
Petroleum	141	510	27.6%	138	467	29.6%	(3)	-2.1%	(43)	-8.4%
Phillips	1,535	5,072	30.3%	1,489	4,937	30.2%	(46)	-3.0%	(135)	-2.7%
Pondera	1,869	6,086	30.7%	1,740	5,767	30.2%	(129)	-6.9%	(319)	-5.2%
Powder River	563	2,040	27.6%	549	1,872	29.3%	(14)	-2.5%	(168)	-8.2%
Powell	1,574	6,984	22.5%	1,688	6,896	24.5%	114	7.2%	(88)	-1.3%
Prairie	285	1,222	23.3%	231	882	26.2%	(54)	-18.9%	(340)	-27.8%
Ravalli	8,099	29,645	27.3%	9,634	32,760	29.4%	1,535	19.0%	3,115	10.5%
Richland	3,299	10,451	31.6%	3,188	10,502	30.4%	(111)	-3.4%	51	0.5%
Roosevelt	3,878	10,870	35.7%	3,882	12,149	32.0%	4	0.1%	1,279	11.8%
Rosebud	3,933	10,770	36.5%	4,083	12,790	31.9%	150	3.8%	2,020	18.8%
Sanders	2,593	9,073	28.6%	2,761	9,270	29.8%	168	6.5%	197	2.2%
Sheridan	1,141	4,346	26.3%	1,021	3,622	28.2%	(120)	-10.5%	(724)	-16.7%
Silver Bow	8,618	34,537	25.0%	8,753	32,714	26.8%	135	1.6%	(1,823)	-5.3%
Stillwater	1,940	6,961	27.9%	2,058	7,121	28.9%	118	6.1%	160	2.3%
Sweet Grass	825	3,126	26.4%	806	2,866	28.1%	(19)	-2.3%	(260)	-8.3%
Teton	1,798	6,195	29.0%	1,778	5,962	29.8%	(20)	-1.1%	(233)	-3.8%
Toole	1,468	4,985	29.4%	1,456	4,868	29.9%	(12)	-0.8%	(117)	-2.3%
Treasure	252	886	28.4%	248	847	29.3%	(4)	-1.6%	(39)	-4.4%
Valley	2,241	8,242	27.2%	2,239	7,812	28.7%	(2)	-0.1%	(430)	-5.2%
Wheatland	621	2,295	27.1%	627	2,147	29.2%	6	1.0%	(148)	-6.4%
Wibaux	298	1,092	27.3%	263	933	28.2%	(35)	-11.7%	(159)	-14.6%
Yellowstone	33,651	122,931	27.4%	37,010	133,105	27.8%	3,359	10.0%	10,174	8.3%
Yellowstone National Park	10	53	18.9%	11	41	26.8%	1	10.0%	(12)	-22.6%
Montana	236,517	848,637	27.9%	253,617	918,241	27.6%	17,100	7.2%	69,604	8.2%
United States	67,351,421	260,072,897	25.9%	70,975,109	274,272,398	25.9%	3,623,688	5.4%	14,199,501	5.5%

Source National Planning Data Corporation, 1994.
Chi Systems, Inc., 1994.

2/1/95: SA0920/CHI SYSTEMS/LMC/SHODAIR/DATABASE/PR1/POPTRACT.XLS

Estimated Population by Race, 1994

County	Total Population		White		Black		Other (1)		Hispanic(2)	
	#	%	#	%	#	%	#	%	#	%
Beaverhead	8,832	100.0%	8,641	97.8%	9	0.1%	182	2.1%	153	1.7%
Big Horn	12,036	100.0%	5,056	42.0%	20	0.2%	6,960	57.8%	346	2.9%
Blaine	6,776	100.0%	3,928	58.0%	6	0.1%	2,842	41.9%	60	0.9%
Broadwater	3,715	100.0%	3,649	98.2%	1	0.0%	65	1.7%	40	1.1%
Carbon	8,475	100.0%	8,401	99.1%	3	0.0%	71	0.8%	97	1.1%
Carter	1,493	100.0%	1,482	99.3%	-	0.0%	11	0.7%	13	0.9%
Cascade	81,326	100.0%	75,702	93.1%	1,185	1.5%	4,439	5.5%	1,615	2.0%
Chouteau	5,520	100.0%	5,281	95.7%	4	0.1%	235	4.3%	26	0.5%
Custer	11,936	100.0%	11,660	97.7%	12	0.1%	264	2.2%	169	1.4%
Daniels	2,042	100.0%	2,018	98.8%	-	0.0%	24	1.2%	12	0.6%
Dawson	8,667	100.0%	8,542	98.6%	1	0.0%	124	1.4%	60	0.7%
Deer Lodge	9,950	100.0%	9,582	96.3%	31	0.3%	337	3.4%	158	1.6%
Fallon	2,960	100.0%	2,935	99.2%	-	0.0%	25	0.8%	6	0.2%
Fergus	12,764	100.0%	12,606	98.8%	9	0.1%	149	1.2%	84	0.7%
Flathead	66,365	100.0%	64,953	97.9%	62	0.1%	1,350	2.0%	764	1.2%
Gallatin	57,112	100.0%	55,733	97.6%	88	0.2%	1,291	2.3%	741	1.3%
Garfield	1,339	100.0%	1,333	99.6%	-	0.0%	6	0.4%	-	0.0%
Glacier	12,395	100.0%	5,198	41.9%	11	0.1%	7,186	58.0%	88	0.7%
Golden Valley	894	100.0%	876	98.0%	4	0.4%	14	1.6%	8	0.9%
Granite	2,543	100.0%	2,515	98.9%	-	0.0%	28	1.1%	9	0.4%
Hill	18,109	100.0%	14,993	82.8%	21	0.1%	3,095	17.1%	186	1.0%
Jefferson	8,577	100.0%	8,413	98.1%	6	0.1%	158	1.8%	98	1.1%
Judith Basin	2,238	100.0%	2,224	99.4%	-	0.0%	14	0.6%	8	0.4%
Lake	22,910	100.0%	17,625	76.9%	15	0.1%	5,270	23.0%	482	2.1%
Lewis and Clark	51,876	100.0%	50,298	97.0%	72	0.1%	1,506	2.9%	695	1.3%
Montana	848,637	100.0%	788,401	92.9%	2,644	0.3%	57,592	6.8%	14,159	1.7%
United States	260,072,898	100.0%	216,382,276	83.2%	32,329,673	12.4%	11,360,949	4.4%	25,740,817	9.9%

(1) Other includes Asian and American Indian/Eskimo/Aleut population.

(2) Hispanic origin is considered an ethnicity, not a race. Persons of Hispanic ethnicity can be of any race.

2/1/95: SA0920/CHI SYSTEMS/LMC/SHODAIR/DATABASE/PR1/RACERPT.XLS

Mental Health Needs Assessment

Estimated Population by Race, 1994

County	Total Population		White		Black		Other (1)		Hispanic(2)	
	#	%	#	%	#	%	#	%	#	%
Liberty	2,247	100.0%	2,229	99.2%	3	0.1%	15	0.7%	4	0.2%
Lincoln	18,022	100.0%	17,650	97.9%	12	0.1%	360	2.0%	217	1.2%
McCone	1,981	100.0%	1,961	99.0%	1	0.1%	19	1.0%	9	0.5%
Madison	6,196	100.0%	6,133	99.0%	-	0.0%	63	1.0%	100	1.6%
Meagher	1,827	100.0%	1,805	98.8%	-	0.0%	22	1.2%	26	1.4%
Mineral	3,627	100.0%	3,510	96.8%	3	0.1%	114	3.1%	45	1.2%
Missoula	86,197	100.0%	82,897	96.2%	210	0.2%	3,090	3.6%	1,162	1.3%
Musselshell	4,135	100.0%	4,097	99.1%	2	0.0%	36	0.9%	36	0.9%
Park	15,183	100.0%	14,910	98.2%	64	0.4%	209	1.4%	266	1.8%
Petroleum	510	100.0%	507	99.4%	-	0.0%	3	0.6%	-	0.0%
Phillips	5,072	100.0%	4,634	91.4%	3	0.1%	435	8.6%	43	0.8%
Pondera	6,086	100.0%	5,355	88.0%	5	0.1%	726	11.9%	30	0.5%
Powder River	2,040	100.0%	1,999	98.0%	-	0.0%	41	2.0%	20	1.0%
Powell	6,984	100.0%	6,651	95.2%	24	0.3%	309	4.4%	83	1.2%
Prairie	1,222	100.0%	1,202	98.4%	-	0.0%	20	1.6%	15	1.2%
Ravalli	29,645	100.0%	29,172	98.4%	45	0.2%	428	1.4%	483	1.6%
Richland	10,451	100.0%	10,260	98.2%	4	0.0%	187	1.8%	244	2.3%
Roosevelt	10,870	100.0%	5,225	48.1%	16	0.1%	5,629	51.8%	112	1.0%
Rosebud	10,770	100.0%	7,781	72.2%	32	0.3%	2,957	27.5%	254	2.4%
Sanders	9,073	100.0%	8,530	94.0%	13	0.1%	530	5.8%	111	1.2%
Sheridan	4,346	100.0%	4,283	98.6%	1	0.0%	62	1.4%	36	0.8%
Silver Bow	34,537	100.0%	33,721	97.6%	36	0.1%	780	2.3%	858	2.5%
Stillwater	6,961	100.0%	6,883	98.9%	5	0.1%	73	1.0%	109	1.6%
Sweet Grass	3,126	100.0%	3,101	99.2%	2	0.1%	23	0.7%	7	0.2%
Teton	6,195	100.0%	6,084	98.2%	3	0.0%	108	1.7%	37	0.6%
Toole	4,985	100.0%	4,834	97.0%	5	0.1%	146	2.9%	36	0.7%
Montana	848,637	100.0%	788,401	92.9%	2,644	0.3%	57,592	6.8%	14,159	1.7%
United States	260,072,898	100.0%	216,382,276	83.2%	32,329,673	12.4%	11,360,949	4.4%	25,740,817	9.9%

(1) Other includes Asian and American Indian/Eskimo/Aleut population.

(2) Hispanic origin is considered an ethnicity, not a race. Persons of Hispanic ethnicity can be of any race.

2/1/95: SA0920/CHI SYSTEMS/LMC/SHODAIR/DATABASE/PR1/RACERPT.XLS

Estimated Population by Race, 1994

County	Total Population		White		Black		Other (1)		Hispanic(2)	
	#	%	#	%	#	%	#	%	#	%
Treasure	886	100.0%	873	98.5%	-	0.0%	13	1.5%	29	3.3%
Valley	8,242	100.0%	7,395	89.7%	9	0.1%	838	10.2%	64	0.8%
Wheatland	2,295	100.0%	2,259	98.4%	1	0.0%	35	1.5%	25	1.1%
Wibaux	1,092	100.0%	1,088	99.6%	-	0.0%	4	0.4%	2	0.2%
Yellowstone	122,931	100.0%	117,675	95.7%	585	0.5%	4,671	3.8%	3,778	3.1%
Yellowstone National Park	53	100.0%	53	100.0%	-	0.0%	-	0.0%	-	0.0%
Montana	848,637	100.0%	788,401	92.9%	2,644	0.3%	57,592	6.8%	14,159	1.7%
United States	260,072,898	100.0%	216,382,276	83.2%	32,329,673	12.4%	11,360,949	4.4%	25,740,817	9.9%

(1) Other includes Asian and American Indian/Eskimo/Aleut population.
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Source: National Planning Data Corporation, 1994.
Chi Systems, Inc., 1994.

Shodair Children's Hospital

Population Density of the Five Least Populous States: 1990

State	Population Per Square Mile of Land Area (1)
Alaska	1.1
Wyoming	4.8
Montana	5.8
North Dakota	9.2
South Dakota	9.4

(1) Persons per square mile were calculated on the basis of land area data from the 1990 census.

Source: Statistical Abstract of the United States, 1994.
U.S. Department of Commerce, p. 28.

Mental Health Needs Assessment

Montana Population Distribution, 1990

Most Populous Counties	Population (All Ages)	Percent of State Total	Youth (0-17 Years) Population	Percent of State Total
Yellowstone	113,419		30,873	
Missoula	78,687		20,233	
Cascade	77,691		21,556	
Flathead	59,218		16,749	
Gallatin	50,163		12,268	
Subtotal counties 50,000 and over	379,178	47%	101,679	46%
Lewis and Clark	47,405		13,144	
Silver Bow	33,941		8,438	
Ravalli	25,010		6,851	
Subtotal counties 25-50,000 population	106,356	13%	28,433	13%
Remaining 48 counties	313,531	39%	91,992	41%
Total Montana (56 counties)	799,065	100%	222,104	100%

Sources: U.S. Bureau of the Census, 1990.
Chi Systems, Inc., 1994.

Comparative State Demographic Data

	Square Mileage (1)	1993 Est. Population (2)	Population Density (3)	1991 Estimated % of Population < 18 Yrs (4)	1993 Estimated Population < 18 Yrs (5)	% of Children in Poverty (6)	# of Children in Poverty (6)	1990 % Below Poverty (7) Family Households	1990 % Below Poverty (7) Non-Family Households	1993 Median Household Income (8)
Alaska	570,833	595,714	1.0	31.60%	188,120	10.9%	20,505	6.8%	10.8%	$46,634
Colorado	103,598	3,504,363	33.8	26.15%	916,302	15.0%	137,445	8.6%	17.5%	$33,017
Connecticut	4,872	3,288,807	675.0	23.21%	763,491	10.4%	79,403	5.0%	11.8%	$45,666
Delaware	1,933	697,194	360.7	24.71%	172,248	11.7%	20,153	6.1%	15.4%	$38,682
Maine	30,995	1,243,481	40.1	25.10%	312,129	13.2%	41,201	8.0%	21.2%	$30,447
Montana	145,388	827,533	5.7	27.72%	229,415	19.9%	45,654	12.0%	24.0%	$25,805
New Hampshire	8,992	1,120,444	124.6	25.34%	283,913	7.0%	19,874	4.4%	14.0%	$39,580
New York	47,379	18,169,892	383.5	24.18%	4,393,053	18.8%	825,894	10.0%	18.6%	$36,538
North Carolina	48,843	6,914,677	141.6	24.39%	1,686,331	16.9%	284,990	10.0%	18.6%	$36,538
Ohio	41,004	11,063,652	269.8	25.77%	2,851,123	17.6%	501,798	9.7%	19.4%	$30,806
Oregon	96,187	3,020,840	31.4	25.60%	773,302	15.2%	117,542	8.7%	19.6%	$29,918
Rhode Island	1,054	1,008,154	956.5	22.91%	230,952	13.5%	31,178	6.8%	19.4%	$36,158
Utah	82,076	1,834,766	22.4	36.27%	665,491	12.2%	81,190	8.6%	20.4%	$32,825
Vermont	9,273	574,372	61.9	25.57%	146,885	11.5%	16,892	6.9%	18.2%	$33,075
Wisconsin	54,424	5,045,576	92.7	26.46%	1,334,965	14.6%	194,905	7.6%	16.9%	$32,264

(1) Source: Rand McNally Road Atlas, 1994.

(2) Population is estimated 1993, based on 1990 census data; source: National Planning Data Corporation.

(3) Estimated population per square mile (1993 estimated state population divided by 1993 state square mileage).

(4) Source: United States Bureau of the Census, Statistical Abstract, 1993.

(5) Percentage of children in poverty based on 1990 census data; number of children in poverty calculated by multiplying 1991 estimated percentage of children in poverty by 1993 estimated number of children; source: National Planning Data Corporation.

(6) Based on 1991 estimates of the resident total population by state, estimated from 1990 census data applied to estimated 1993 statewide population; source: United States Bureau of the Census, 1993.

(7) Percentage below poverty status is 1990 data, and divided into family and non-family households: family households defined as containing two or more directly related persons living together; non-family households defined as containing any number of non-related persons living together; CACI Marketing Systems.

(8) 1993 estimated median household income; source: National Planning Data Corporation.

Sources: Rand McNally Road Atlas, 1994.
The Sourcebook of County Demographics, Sixth Ed., CACI Marketing Systems, 1993.
National Planning Data Corporation, 1994.
United States Bureau of the Census, Statistical Abstract, 1993.
Shodair Hospital, 1994.
Chi Systems, Inc., 1994.

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